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Proper use of the CNDDB Point GIS Layer

The CNDDBPNT.shp (point feature class) GIS dataset should only be used for gross, graphic representations of the CNDDB for large areas or areas which are densely populated with occurrences. The CNDDB.shp (polygon feature class) GIS dataset houses more accurate occurrence location representations and information, and must be used when performing spatial analyses.

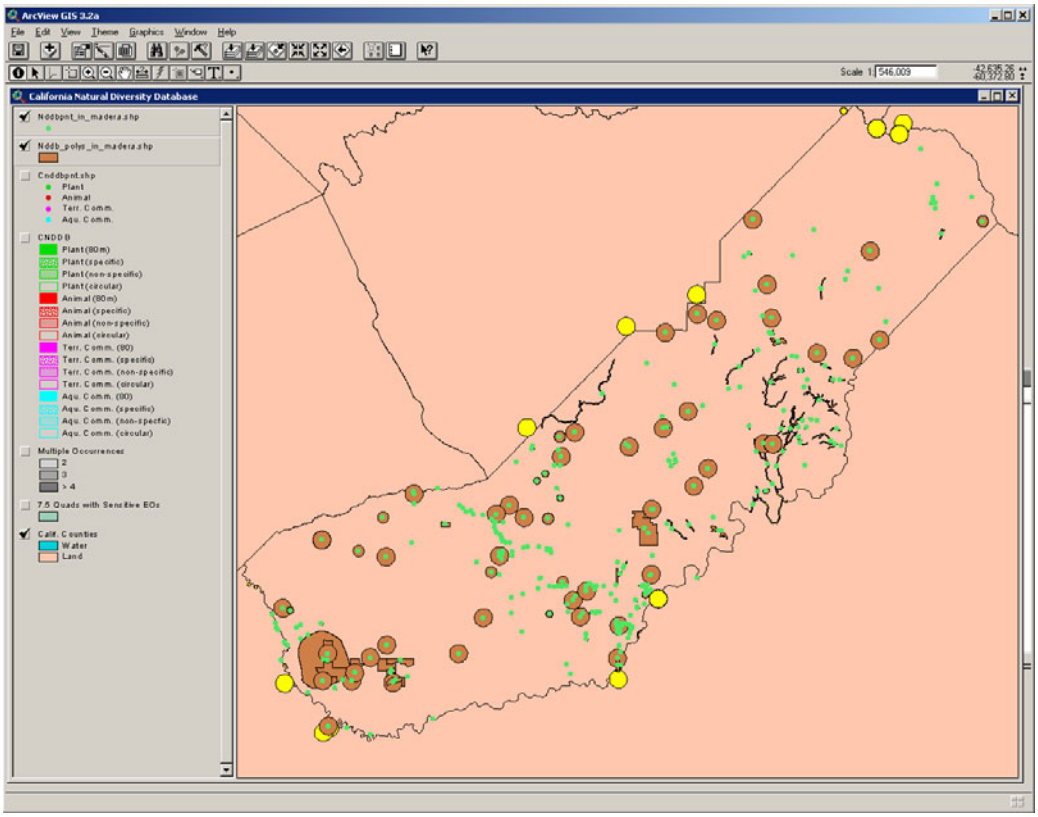
In CNDDBPNT.shp, the point that represents each occurrence in the dataset is ***not*** the point of the actual occurrence. Many of the CNDDB users report that they use the CNDDBPNT dataset because they think the point is the actual point of the "site" and that the polygon is generated from the point. In fact, the opposite is the case.

When a CNDDB biologist digitizes an element occurrence as a polygon or multiple polygons with an accuracy class (ACC_CLASS) value equal to two (2) or three (3), the point is the interpreted "center" of the occurrence as determined by the biologist. For occurrences requiring circles with varying radii and accuracy classes of one (1) or four (4) through 10, a point is generated at the circle center. For more information about the ACC_CLASS field, please see the document C:\CNDDB3\rfdocs\03field_names.html, which is included with subscriptions to the CNDDB RareFind 3.

Example: Why the CNDDB Point Dataset should not be used for Analysis

In most instances, analysis using CNDDB data should not be done using the point feature dataset (CNDDBPNT.shp). If you believe that your analysis is better suited to using the point feature class, please contact the CNDDB biology staff to confirm this at (916) 322-2493.

Here is an example using Madera County. When the point data layer is used to select Element Occurrences, the polygons whose points are outside the border of the feature used for selection will be left out of the selection set. Try this yourself. Select the CNDDB polygons in Madera County. Then do the same using the CNDDB point feature data layer. Compare your results.



Polygon occurrences not in selection set 1

Steps in ArcView 3.2

1. Open the supplied CNDDB.apr and add the CNDDBPNT.shp dataset from C:\CNDDB3\gis\

2. Select the CNDDB points inside Madera County using Madera County as the selection feature:
    - Select Madera County by making the Calif. County theme the active theme and then clicking on Madera County with the Select Feature tool.
    - Make the CNDDBPNT point theme the active theme.
    - On the Theme drop down menu, choose Select by Theme.
    - Select features of the active theme (CNDDBPNT) that intersect the selected features of Calif. Counties.
    - Open the attribute table of the CNDDBPNT layer to see that 337 point element occurrences have been selected.

3. Now, select the CNDDB polygons inside Madera County:
    - If Madera County is not still selected, re-select it.
    - Make the CNDDB polygon theme the active theme.
    - On the Theme drop down menu, choose Select by Theme.
    - Select features of the active theme (CNDDB) that intersect the selected features of Calif. Counties.
    - Open the attribute table of the CNDDB layer to see that 369 polygon element occurrences have been selected.
    - Results: 369 polygon element occurrences versus 337 point element occurrences.

Note: the polygons highlighted above in yellow are the occurrences left out of the selection set using the CNDDBPNT.shp dataset. Again, this is due to the fact that the points for those polygons are outside the spatial selection criteria – the points are not in nor do they intersect the selected feature, Madera County. However, the element occurrences associated with those points ***do*** intersect Madera County.

Your results may vary depending on the month and year of the CNDDB dataset you are using. This analysis was performed using the January 2004 CNDDB datasets.